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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/940,705	08/29/2001	Yen-Wu Miao	MR1035-936	5751

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EXAMINER	
ROBINSON BOYCE, AKIBA K	

ART UNIT	PAPER NUMBER
3639	

DATE MAILED: 08/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/940,705	MIAO, YEN-WU	
	Examiner	Art Unit	
	Akiba K. Robinson-Boyce	3639	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *29 August 2001*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-17* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-17* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Status of Claims

1. Due to communications filed 6/29/01, the following is a non-final first office action. Claims 1-17 are pending in this application and have been examined on the merits. Claims 1-17 are rejected as follows.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 4, 5, 7-11 is rejected under 35 U.S.C. 102(b) as being anticipated by Hayashi et al (US 5,771,008).

As per claims 1, Hayashi et al discloses:

a plurality of control path units installed at inlets and outlets of a charging traffic system, each unit including a vehicle identification device and signal emitting device transferring signals information about vehicles and locations of the vehicles, (col. 7, lines 17-22, ground units installed at inlet and outlet gate for exchanging information with the vehicle mounted unit, where it is shown that the vehicle mounted unit stores the ID code in col. 8, lines 44-45, w/ col. 7, lines 23-29, shows that inlet unit has antenna to transmit toll road inlet gate information, w/col. 7, lines 60-67, shows that outlet unit has a vehicle type detection system);

a user mobile communication unit including a mobile communication device for transferring messages comprising user's financial accounts and the vehicles, (col. 12, lines 46-54, vehicle mounted unit, vehicle information on outstanding account);

at least one mobile communication base unit including a central processing unit for receiving messages of the control path units and the mobile communication unit and checking the messages, (Col. 9, lines 6-29, route grasping antenna control unit with microcomputer); and

at least one financial unit for receiving the message from the user and then making a financial transaction for paying a toll, (col. 7, lines 60-67, charge hand-over system);

wherein the central processing unit calculates a traveling length and a toll according to the received location message from an inlet control path and an outlet control path, (Col. 7, line 67-col. 8,line 4, local controller to automatically collect traffic charge according to route where the local controller is a computer, therefore having a CPU is an inherent feature).

As per claim 4, Hayashi et al discloses:

wherein the vehicle identification device is a camera, (Col. 7, lines 63-65, camera).

As per claim 5, Hayashi et al discloses:

wherein the vehicle identification device includes an image identification device, (col. 7,lines 63-65, vehicle imaging system).

As per claims 7, 11, Hayashi et al discloses:

wherein messages from the mobile communication unit includes types, numbers, positions of vehicles entering into and leaving from the control path, (col. 7, lines 10-16 and col. 8, lines 44-45, vehicle type, license number stored by signal processing circuit of vehicle mounted unit and transmitted in the handshake operation, w/ col. 9, lines 6-23, shows vehicle mounted unit also includes route grasping antenna).

As per claim 8, Hayashi et al discloses:

wherein the messages from the mobile communication unit includes time, (Abstract, lines 5-8, time).

As per claim 9, Hayashi et al discloses:

wherein the messages from the mobile communication unit includes financial accounts of users, (Col. 7, lines 10-16, outstanding charge information).

As per claim 10, Hayashi et al discloses:

identifying a vehicle by a vehicle identification device in an inlet control path unit as the vehicle enters into an inlet control path and acquiring information of the vehicle, (col. 7, lines 17-22, ground units installed at inlet and outlet gate for exchanging information with the vehicle mounted unit, where it is shown that the vehicle mounted unit stores the ID code in col. 8, lines 44-45).

signal emitting device of the inlet control path unit transferring vehicle and location information to a mobile communication base unit/ a signal emitting device at the control path unit transferring information about the vehicle and locations to the mobile communication base unit, (col. 7, lines 23-29, shows that inlet unit has antenna to transmit toll road inlet gate information);

a mobile communication device in the vehicle transferring a message of user' s financial account and vehicle information for registration in a mobile communication base unit/ the mobile communication device in the vehicle again transferring a message of user's financial account and vehicle information for registration in a mobile communication base unit, (col. 12, lines 46-54, vehicle mounted unit, vehicle information on outstanding account);

a vehicle identification device an outlet control path unit identifying the vehicle when the vehicle leaves from an outlet control path and acquiring information about the vehicle, (col. 7, lines 60-67, charge hand-over system);

a central processing unit in the mobile communication base unit calculating a toll responsive to received information; and paying the toll from the user's financial account to a financial unit, (Col. 7, line 67-col. 8,line 4, local controller to automatically collect traffic charge according to route where the local controller is a computer, therefore having a CPU is an inherent feature).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hayashi et al (US 5,771,008).

As per claim 2, Hayashi does not specifically disclose the following, but does disclose a mobile unit communication control method in the abstract, line 1.

However, official notice is taken that it is old and well known in the communications art for the communication device to be a mobile phone. It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention for the communication device to be a mobile phone with the motivation of incorporating a common mobile communications device into a vehicle-mounted system.

6. Claims 3, 6, 12-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hayashi et al (US 5,771,008), and further in view of Nunberg (US 4,789,941).

As per claims 3, 6, Hayashi et al does not disclose the following, however, does disclose receiving messages in the form of signals in the abstract, lines 4-15.

However, Nunberg discloses:

wherein the mobile communication device further includes an actuating device for receiving messages about the control path units for actuating the mobile communication device/ wherein the mobile communication device includes an actuating device for receiving signals of the control path units and actuating the mobile communication device, (Col. 4, lines 63-68, ranging unit actuated upon detection of a vehicle ranging pulse). Nunberg discloses this limitation in an analogous art for the purpose of showing that actuation takes place as a result of mobile communications.

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to include an actuating device for the purpose of putting the mobile communication device into motion.

As per claim 12, Hayashi et al discloses:

identifying a vehicle by a vehicle identification device in an inlet control path unit as the vehicle enters into an inlet control path and acquiring information of the vehicle, (col. 7, lines 17-22, ground units installed at inlet and outlet gate for exchanging information with the vehicle mounted unit, where it is shown that the vehicle mounted unit stores the ID code in col. 8, lines 44-45);

the signal emitting device of the control path unit transferring vehicle and location information to...device within the vehicle, (col. 7, lines 23-29, shows that inlet unit has antenna to transmit toll road inlet gate information);

... the mobile communication device in the vehicle for transferring a message of user's financial account and vehicle information for registration in a mobile communication base unit/... the mobile communication device in the vehicle again for transferring a message of user's financial account and vehicle information for registration in a mobile communication base unit, (col. 12, lines 46-54, vehicle mounted unit, vehicle information on outstanding account);

a signal emitting device at the control path unit transferring information about the vehicle and locations to the...vehicle, (col. 7, lines 23-29, shows that inlet unit has antenna to transmit toll road inlet gate information);

central processing unit in the mobile communication base unit calculating a toll responsive to the received information; and paying the toll from the user's financial account to a financial unit, (Col. 7, line 67-col. 8,line 4, local controller to automatically collect traffic charge according to route where the local controller is a computer, therefore having a CPU is an inherent feature).

Hayashi et al fails to disclose an actuating device within the vehicle or the actuating device actuating the mobile communication device in the vehicle, but does disclose a mobile communication device inside of a vehicle in the abstract, lines 1-8, by disclosing a vehicle mounted unit).

However, Nunberg discloses an actuating device, (Col. 4, lines 63-65, actuating a vehicle upon detection of a vehicle ranging pulse). Nunberg discloses this limitation in an analogous art for the purpose of showing that actuation takes place as a result of mobile communications.

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to include an actuating device for the purpose of putting the mobile communication device into motion.

As per claim 13, Hayashi et al discloses:

wherein the information of the vehicle includes a type and a number of a vehicle, (col. 7, lines 10-16 and col. 8, lines 44-45, vehicle type, license number stored by signal processing circuit of vehicle mounted unit and transmitted in the handshake operation).

As per claims 14 and 15, Hayashi et al does not disclose the following, but does disclose payment transactions in col. 7, line 67-col. 8,line 4.

However, Nunberg discloses:

wherein after a transaction of paying tolls is complete, the central processing unit transfers a message to the mobile communication device/ wherein the transaction message is an electronic receipt., (Col. 1, lines 19-22, toll receipt). Nunberg discloses this limitation in analogous art for the purpose of showing that receipts are given as a result of the collection of tolls.

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to transfer a message represented by a receipt to the mobile communication device with the motivation of giving a visual representation that the transaction has completed.

As per claim 16, Hayashi et al discloses:

wherein the transfer message is information for supplementing deficit charges, (Col. 7, line 67-col. 8, line 4, outstanding charges).

As per claim 17, Hayashi et al does not disclose the following, but does disclose payment transactions in col. 7, line 67-col. 8,line 4 where the passenger's payment is processed according vehicle route, and therefore the passenger's financial account depends on the vehicle route.

However, Nunberg discloses:

wherein after the mobile communication base unit receives messages of the user's financial account and information of the vehicle and location from the mobile communication unit at the inlet control path, then the central processing unit pretests a transaction to a specific financial unit based on the user's financial account, (Col. 6,

lines 37-51, shows both pre-existing profile and vehicle profile data is involved in height sampling, which occurs where height is based on the vehicle distance from the ranging unit or route, w/ col.. 5,lines 38-49, shows height samplings are transmitted to the toll calculator). Nunberg discloses this limitation in an analogous art for the purpose of showing that the vehicle height samplings, which includes pre-existing/vehicle profile data is incorporated into calculating the tolls.

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to pretest a transaction to a specific financial unit based on the user's financial account with the motivation of testing a transaction before actually implementing the transaction procedure.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Akiba K Robinson-Boyce whose telephone number is 571-272-6734. The examiner can normally be reached on Monday-Tuesday 8:30am-5pm, and Wednesday, 8:30 am-12:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Hayes can be reached on 571-272-6708. The fax phone numbers for the organization where this application or proceeding is assigned are 703-746-7238 [After final communications, labeled "Box AF"], 703-746-7239 [Official Communications], and 703-746-7150 [Informal/Draft Communications, labeled "PROPOSED" or "DRAFT"].

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

A. R. B.
August 11, 2005

JOHN W. HAYES
PRIMARY EXAMINER